# 1. INTRODUCTION

This operation instruction manual conforms to the requirements of the 98/37/EEC Machine Directives and subsequent amendments.
In the light of this, special attention has been given to safety aspects and accident prevention in the work-place for each stage in the machine's "life". Information which could be of particular assistance to the operator has been highlighted.
**The "Operating instructions" are an integral part of the machine and should be consulted before, during and after the start up of the machine and whenever else required. The content of these instructions should always be carefully observed.**
The observance of the above is the only way to achieve the two fundamental aims of this manual:

- **Optimization of machine performance**
- **Prevent damage to the machine and injury to the operator**

The index of the chapters and the index of the drawings, diagrams and tables is contained in chapter 3 and can be used to help the location of specific information.

**CAUTION : BEFORE INSTALLING THE MACHINE, READ THE OPERATING INSTRUCTIONS CAREFULLY**

# 2. INFORMATION ABOUT MAINTENANCE ASSISTANCE

## 2.1 GUARANTEE

- MIVA S.a.s. products are guaranteed against material and manufacturing defects for a period of 12 months from the date of delivery or, if the machine is installed by MIVA employees, from the date of machine start up.
- The buyer is only entitled to the replacement of parts which are acknowledged as faulty: carriage and packing are at the buyer's expense.In the event of the above, the following information should be supplied:

1. Date and number of purchasing document
2. Machine model
3. Serial number
4. Code of any relevant drawings

- Requests for compensation for the inactivity of the machine will not be accepted.
- The guarantee does not cover uses which are not in line with these operating instructions which are an integral part of the machine. Nor is maintenance covered if the instructions supplied are not observed.
- The guarantee will not cover machines which have undergone unauthorized modifications.
- Modification or tampering with the safety devices is strictly forbidden.

# 3. INDEX

## 3.1 INDEX OF CHAPTERS


Chap. 1 Introduction
Chap. 2 Information about maintenance assistance
Chap. 3 Index of chapters, drawings, diagrams and tables
Chap. 4 Description of the machine
Safety standards complied with during the design and construction of the machine
Description of the machine and its components
Chap. 5 Main technical data
Chap. 6 Handling and transportation
Chap. 7 Installation
Chap. 8 Start up and operation
Devices and their location
Tools supplied
Operation
Special safety checks
General safety rules
Measures to prevent residual risks
Chap. 9 Maintenance and repairs
General safety measures
Routine checks and maintenance
Description of routine maintenance
Chap. 10 Information regarding environmental noise
Chap. 11 List of spare parts

## 3.2 INDEX OF DRAWINGS, DIAGRAMS AND TABLES

| ENCL. TYPE | DESCRIPTION | ENCL No. | CHAP. |
|---|---|---|---|
| **Table** | **Choice of circular blade** | **1** | **8.3** |
| **Drawings** | **Handling and transportation- Installation plan** | **1** | **6/7/8** |
| **Drawings** | **Electrical details** | **2** | **7** |
| **Diagram** | **Electrical installation** | **2** | |
| **Drawings** | **Motor-blade block** | **3** | **7/8.3/9** |
| **Drawings** | **Base block and vice** | **3** | **8.3/9.3** |
| **Drawing** | **Machine assembly** | **4** | **8.3** |

# 4. DESCRIPTION OF THE MACHINE

### 4.1 SAFETY STANDARDS COMPLIED WITH DURING THE DESIGN AND CONSTRUCTION OF THE MACHINE

The machine produced by us is in compliance with:

- **98/37/EEC Machinery Directive** (ex 89/392/EEC, as amended by the 91/368/EEC, 93/44/EEC and 93/68/EEC Directives ).

The following Standards apply:

- EN 292-1 1991 Safety of machinery - Basic concepts and general principles for design. Basic terminology and methods.

- EN 292-2 1991 Safety of machinery. Basic concepts and general principles for design. Specifications and technical principles.

- EN 418 1994 Safety of machinery. Emergency stop devices, functional aspects - design principles.

- EN 983 1996 Safety requirements related to systems and components for hydraulis and pneumatic transmissions.

- EN 1037 1995 Safety of machinery. Isolation and energy dissipation. Prevention of unexpected start-up.

- EN 1088 1995 Safety of machinery - Interlocking devices with and without guard - locking. General principles and provisions for design.

- EN 60204-1 1998 Safety of machinery. Electrical equipment of machines. Part 1 : General requirements Sa

- EN 60204-2 1990 Electrical equipment of industrial machines. Part 2: Item designation and examples of Drwg.ings, diagrams, tables and instructions.

- **89/336/EEC Directive on electromagnetic compatibility**, as amended by the 92/31/EEC, 96/68/EEC, 93/97/EEC and 93/68/EEC

The following Standards apply:

- EN 50081-1 General Standard for emission levels
- EN 50082-1 General Standard for immunity

**73/23/EEC Low Voltage Directive**, **as amended by the 93/68/EEC Directive**

## 4.2 DESCRIPTION OF THE MACHINE AND ITS COMPONENTS

The 350 NEW cutting-off machine with circular blade for ferrous metals produced by MACC is made from a solid casting, carefully processed and provided with holes for fastening to a bench or pedestal. The upper surface, designed to allow the complete draining away of the cutting fluid, has been processed using precision machinery to allow the attachment of a sturdy vice with burr-proof jaws.
The bar-stop device allows the length required to be preset and a constant level of performance for repeated cuts.
The blade-holding head is firmly attached to a reduction unit in oil bath built onto the motor and to the base by means of a joint which provides 45° rotation both to the left and right and the cutting movement with manual feed.
The coolant pump is also securely attached to the motor block.
The main switch is located above the motor block. Another switch is used to select motor rotation speed and therefore cutting speed.
The control lever, fitted with an ergonomic hand-grip and blade activation button with safety release action, reduces fatigue during operation to a minimum.
The blade is protected by a guard which in its turn protects the operator from ejected shavings and coolant.
The machine is supplied with a set of service spanners.

## 4.3 INTENDED AND UNSUITABLE USES OF THE MACHINE

**The 350 NEW cutting-off machine with circular blade has been designed and built to cut bars, structural steel and ferrous metal pipes in accordance with the instructions contained in this manual.**
**Therefore, the cutting of other materials is not permitted: if the above recommendations are not observed, the machine could be damaged and the health and safety of the operator put at risk.**
**Cutting is not permitted, if the bar has not been first locked in the vice.**

# 5. MAIN TECHNICAL DATA

**Under no circumstances should the following data be altered, this is in order to protect the correct functioning of the machine and to avoid creating safety risks for the operator.**

| | |
|---|---|
| MOTOR<br>Motor Power<br>Motor revolutions (two speeds) | three-phase<br>KW 2,5/3,3 - KW 1,8/2,4<br>1400-2800 rpm 700-1400 rpm |
| CIRCULAR BLADE (SAW)<br>Maximum diameter and thickness | Number of teeth and feed holes according to table<br>Diameter: 350 mm Thickness: 3 |
| BLADE REVOLUTIONS per minute | 40-80 rpm 20-40 rpm |
| CUTTING ANGLE | 90° right - 45° left |
| PIECE LOCKING VICE: MAX OPENING | 190 mm |
| COOLANT TANK CAPACITY | litres 3 |
| MACHINE WEIGHT | 210 kg - 2060 N |

# 6. HANDLING AND TRANSPORTATION

For safe handling and transportation use a lift truck for movement indoors or a bridge crane; in this case, also using cables fastened to the sling positions indicated on the drawing 1 Encl. 1. Keep the machine in its normal position and avoid turning it upside down. **If the machine is fastened to the pedestal, stability will be greatly reduced and therefore all the necessary measures should be taken to stop the machine from tipping over.**

All handling and transportation operations should be carried out by trained staff.

# 7. MACHINE INSTALLATION

## A. MACHINE CHECK AND CONTROL LEVER ASSEMBLY

The machine should be checked to make sure that it has not been damaged during transportation and handling.
Control lever assembly (drawing 4. Encl. 2) : Fit the supplied head lever 25, into position 24 and fasten it by means of the nut 50. To fit the handle, connect the electric cable terminals 220 to the microswitch 218 and place it in the left second half of the handle as shown in draw. 4 Encl.2. Complete the assembly using the screws 221 and then 219. Make sure that the cable is inserted into the lever slot 25, after having checked that there are no burrs or sharp edges in the slot.

## B. FASTENING OF THE MACHINE

**The machine will be able to operate in keeping with the technical parameters supplied by MIVA if it is positioned correctly and fastened securely to the bench or the factory floor so that vibrations are minimal during operation . Consult drawing 2 350 NEW Installation plan Encl.1.**

## C. ASSEMBLY OF CIRCULAR BLADE

For the assembly of the circular blade, remove the screw No. 36 (Draw. 6 Encl. 3), keeping the motor-blade block raised and rotate the mobile guard 31 backwards. Unscrew the screw 28 clockwise, withdraw the flange 29, insert the circular blade, making sure that the toothing faces the same direction as the arrow on the mobile guard. Then refit flange 29 and screw 28.

## D. ELECTRICAL CONNECTION TO THE MAINS

**Install a differential thermomagnetic switch with characteristics suited to the mains.**

Make sure that the power supply voltage corresponds to the voltage on the motor plate. Connect the cable to the power supply line observing the colour codes of the individual wires, pay particular attention to the earth wire. Connect the machine, make sure that the rotation of the circular blade is in the direction shown by the arrow on the guard.

## E. CUTTING COOLANT

For the cooling of the circular blade, fill the tank with emulsible oil obtained from a mixture of water and AGIP ULEX 260 EP oil with a percentage of 5-7%

# 8. MACHINE START UP AND OPERATION

## 8.1 DEVICES AND THEIR LOCATION

(The location of the devices described is shown on the 350 NEW installation plan Encl. 1)

| | | |
|---|---|---|
| Code | 212 | LOCKABLE MAIN SWITCH |
| Code | 218 | START-STOP MICROSWITCH: situated inside the handle located at the end of the control lever and has safety release action. |
| Code | 208 | EMERGENCY STOP |
| Code | 4 | CUTTING ANGLE DEVICE: to check that cutting inclination is as required |
| Code | 21 | LOCKING VICE |
| Code | 77 | BAR-STOP |
| Code | 25 | CONTROL LEVER WITH HANDLE |

## 8.2 TOOLS SUPPLIED

| | |
|---|---|
| 1 | Allen wrench size 3 |
| 1 | Allen wrench size 4 |
| 1 | Allen wrench size 5 |
| 1 | Allen wrench size 6 |
| 1 | Allen wrench size 14 |

## 8.3 OPERATION

CHECKS TO CARRY OUT BEFORE EACH CUT

A. Make sure that the circular blade is fastened securely by means of screw 28 (DRAW.6 ENCL.3)
B. Check that the hand indicates the required cutting angle (vice scale)
C. Make sure that the head and vice are locked by means of the lever 88 (DRAW.7-8 ENCL.3)
D. With the motor off, lower the head and check that at the end of the stroke, the circular blade does not touch the counter-vice 75. If the circular blade does touch, adjust the screw 109 located at the centre of the head support 4 (DRAW.5 ENCL.3)
E. Make sure that the piece to be cut is adequately secured in the vice.
F. Make sure that the coolant is circulating in the machine.

**CUTTING OPERATION**

A. Before each cutting operation, if the cutting inclination is not as required, correct or change the inclination by placing the bench lever 88 in position 2 (DRAW.8 ENCL.3) and after correction, forcefully turn it to position 1.
B. Clamp the piece to be cut by means of the handwheel 11 (DRAW.7 ENCL.3), turn the main switch 212 and the speed switch 203 to the position required (we recommend No.1), take hold of the handle 26 located at the end of the head lever and press button 218. The blade will now start turning.
C. Position the blade carefully on the piece to be cut. Then increase the pressure in order to accelerate the cutting operation without using excessive force. To make a series of cuts, position the bar-stop 77 at the size required. Fix it into position by using the knob 79 (DRAW.9 ENCL.4).
D. To replace the circular blade carry out the same operations used to assemble the circular blade. (chapter 7c).
E. For the choice of most suitable blade consult the table ENCL. 1.

**We strongly discourage the use of blades with ruined or insufficiently sharp cutting edges**

## 8.4 SPECIAL SAFETY CHECKS

A. Before using the machine, check carefully that the safety devices are in good working order, that the mobile parts are not blocked, that no parts are damaged and that all the components are installed correctly and are functioning properly.

**B. Make sure, before operating the machine, that the screws of the guards and other protective devices are adequately secured, especially the screws on the circular blade guard and the rotation levers of the circular blade mobile guard.**

**C. Check that the safety microswitches and the emergency button are functioning correctly. Test them during a loadless machine cycle.**

**D. Make sure that the mobile guard does not leave uncovered an angle of more than 5° in order to prevent fingers from entering.**

E. Pay attention to environmental conditions. Do not expose the machine to rain; to not use it in damp environments, position the machine on a clean dry floor that has no oil or grease stains.

F. Before using the machine, the operator should make sure that all tools and service spanners used for maintenance or adjustment have been removed.

## 8.5 GENERAL SAFETY RULES

A. Wear appropriate clothing. The operator's clothing should not be loose or dangling nor should it have parts which could easily get caught. Sleeves should contain elastic.

Belts, rings or chains should not be worn. Long hair should be kept in a net.

B. Avoid unstable operating positions. Find a safe and evenly balanced position to operate the machine.

C. Keep the work area tidy, untidiness increases the risk of accidents.

D. Do not use the power supply cable to disconnect the plug from the socket. Protect the cable from high temperatures, oil or sharp edges. For outdoor use, only use extension cables which are in line with current regulations.

## 8.6 MEASURES TO PREVENT RESIDUAL RISKS

A. The removal of guards and tampering with the safety devices is strictly forbidden.

B. Gloves should always be worn.

C. Standard work clothing should be used and kept closed and should not have flapping parts.

D. The machine should not be cleaned with liquids under pressure.

E. In the event of fire, extinguishers should not be used unless they are the powder type. The electric power supply to the machine should always be disconnected in these circumstances.

F. Do not insert foreign bodies into the motor cover and to not supply the machine with voltage by tampering with the safety microswitches or main switch.

**G. Take the necessary precautions to avoid the machine being started by other people during loading, adjustment, piece changing or cleaning.**

# 9. MAINTENANCE AND REPAIRS

## 9.1 GENERAL SAFETY MEASURES

**A. Lockable main switch. Open the padlock in the event of machine failure or replacement of the circular blade. The padlock key should be entrusted to a responsible person.**

**B. Before carrying out any work on electrical equipment, remove the power supply plug from the control panel (disconnect voltage).**

**C. Only use cables to supply power, which have a cross-section suited to the power of the machine.**

D. Opening key. The keys of the machine should be kept by authorized personnel. Do not leave the keys for doors which provide access to the hydraulic or electrical parts or keys to lockable switches in easy of reach of unauthorized personnel.

E. Repairs should only be carried out by authorized personnel. Only spare parts made by the original manufacturer should be used, otherwise these could cause damage or injury.

## 9.2 ROUTINE CHECKS AND MAINTENANCE

| FREQUENCY (working hours) | OPERATION |
|---|---|
| 1000 hours | Replace the oil in the gear box with AGIP ACER 320 oil (0.2 litres) or equivalent. |
| 1000 | Lubrication of mobile parts in the piece locking vice (GREASE AGIP MU 2) |
| 50 | Cleaning of the coolant tank and filter check |
| if necessary | Check functioning of bench lever |

## 9.3 DESCRIPTION OF ROUTINE MAINTENANCE

**A. Replacement of gear box oil**

Remove caps 95 and 22 (draw.5-6 Encl.3), let all the used oil flow out into a container which should have a label indicating the contents for the purposes of disposal. Replace cap 22. Feed 0.2 litres of oil (as specified above) into the oil feed hole located on the upper part of the gear box and then replace cap 95.

**B. Lubrication of mobile parts of piece locking vice**

Remove the vice 21 completely by turning hand wheel 11. Clean and grease the parts worked by the counter-vice 75, the vice 21 and the vice gib 101. Put a drop of oil in the oil feed hole 19 located behind the handwheel.

**C. Cleaning of the coolant tank: Filter check.**

Empty the coolant from the tank by means of the tap located on the rear part of the machine bench (after moving the liquid feed pipe away from this). Collect the coolant in a container for future disposal.

Remove screws 118 and the drilled plate 87 (draw.8 Encl.3). Clean out the shavings and the metallic powder, taking care not to scatter this over the machine especially around the motor and the box containing the electrical equipment. Refit the plate 87 and fasten it with screws 118, turn the tap off and reconnect the pipe. Check filter 55 and if necessary replace it. Fill the tank with the amount and liquid stated previously.

**D Checking of bench lever functioning**

Check regularly that the rotation release - locking lever is working properly. In the event of the lever not locking correctly, loosen grub screw 91 (draw.7 Encl.3), tighten nut 90 and fasten grub screw 91 again. Make sure that with the bench lever in position 2, arm 4 which supports the blade-motor block can rotate freely.

## 10.INFORMATION REGARDING ENVIRONMENTAL NOISE

**An environmental noise test carried out on the 350 NEW cutting-off machine with circular blade, identical to the machine to which these operation instructions refer, has given the following results:**

ACOUSTIC RADIATION PRESSURE

1. $L_{Aeq}$ = 82,6 dB (A)
2. $L_{peak}$ = 90.6 dB (the maximum acceptable value is 140 dB).
3. The level of background noise has no influence = 48.5-54,2 dB (A).

# 11. LIST OF SPARE PARTS

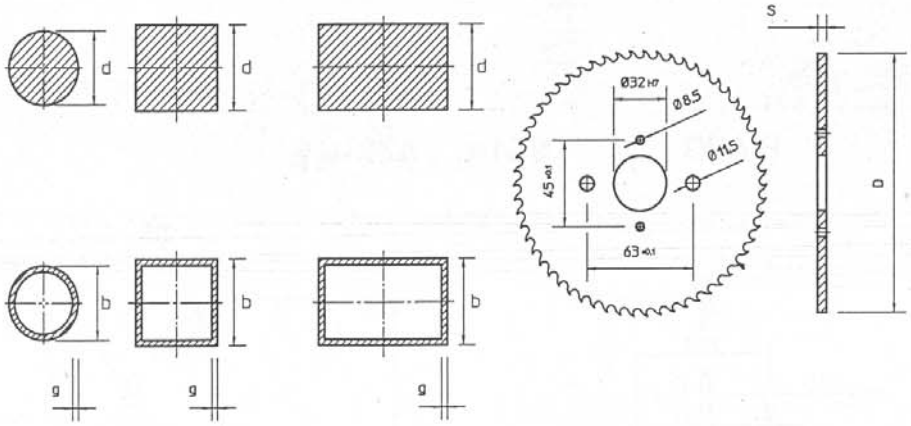
| POS. | DESCRIPTION | CODE | POS. | DESCRIPTION | CODE |
|---|---|---|---|---|---|
| 1 | Pedestal | 004/71 | 62 | | |
| 2 | Bench | 001/06 | 63 | Oil retainer 30-47-7 | 067/04 |
| 3 | O-Ring 134 | 068/04 | 64 | Bearing 3205 | 065/04 |
| 4 | Rotating arm | 005/07 | 65 | Snap ring D.52 I DIN 472 | |
| 5 | Roller arm pin | 048/04 | 66 | Worm screw spacer | 018/07 |
| 6 | Snap ring D.25 DIN 471 | | 67 | Worm screw | 020/04 |
| 7 | Nut M10 DIN 934 | | 68 | Self-locking ring-nut M17x1 | |
| 8 | Screw HH M10x55 DIN 934 | | 69 | Bearing 6302 | 044/03 |
| 9 | Roller arm | 047/04 | 70 | Helical gear | 015/07 |
| 10 | Roller | 049/04 | 71 | Self-locking ring-nut M30x1,5 | |
| 11 | Vice handwheel | 029/03 | 72 | HSFHC screw M10x16 DIN 7991 | |
| 12 | Hexagon socket grub with cone point M10X10 DIN 914 | | 73 | Washer | 067/31 |
| 13 | Vice spring | 021/31 | 74 | Countervice right jaw | 016/19 |
| 14 | Hexagon socket grub with cone point M8X10 DIN 914 | | 75 | Countervice | 003/19 |
| 15 | Vice bearing flange | 020/31 | 76 | Nut M16 DIN 936 | |
| 16 | Cage AxK 30 47 | 060/31 | 77 | Bar stop | 004/05 |
| 17 | Fifth wheel AS 30 47 | 061/31 | 78 | Bar stopping rod | 031/05 |
| 18 | Stop bush | 025/03 | 79 | Handwheel D.40 M8x25 | 077/25 |
| 19 | Oiler D.6 | | 80 | Water pipe | |
| 20 | Vice lever | 007/31 | 81 | | |
| 21 | Vice | 008/03 | 82 | | |
| 22 | Oil dram plug 3/8” | | 83 | Bench tap | 042/05 |
| 23 | Oil lever plug 3/8” | | 84 | | |
| 24 | Head | 003/07 | 85 | | |
| 25 | Head lever | 028/19 | 86 | | |
| 26 | Head lever handle | 046/05 | 87 | Crucible | 021/21 |
| 27 | Disk | | 88 | Bench lever | 002/06 |
| 28 | Disk nut | 030/06 | 89 | Belleville washer 50x25,4x2 DIN2093 | |
| 29 | Disk flange | 020/07 | 90 | Selflocking ring nut 32x1.5 | |
| 30 | Snap ring D.45 E | | 91 | Dowel M8x10 DIN 916 | |
| 31 | Disk movable guard | 012/07 | 92 | Key 6x6x40 DIN 6604 | |
| 32 | HSHC screw M6x14 DIN 912 | | 93 | Disk shaft | 019/07 |
| 33 | Divider | 026/07 | 94 | Oil retainer 50/65x8 | |
| 34 | Water pipe | | 95 | Oil filling cap 3/8” | |
| 35 | Disk guard | 011/07 | 96 | Left vice jaw | 032/03 |
| 36 | HSHC screw M6x16 DIN 912 | | 97 | | |
| 37 | Movable blade cover rod | 016/04 | 98 | Left countervice jaw | 015/19 |
| 38 | HSHC screw M8x20 DIN 912 | | 99 | Dowel M8x25 DIN 914 | |
| 39 | Fixed blade cover rod | 016/06 | 100 | Nut M8 DIN 934 | |
| 40 | Dowel M10x45 DIN 914 | | 101 | Vice gib | 031/03 |
| 41 | Front motor flange | | 102 | Fast clamping vice screw | 033/03 |
| 42 | Motor casing | | 103 | Support plate of low voltage control | 048/21 |
| 43 | Key 5x5x35 DIN 6604 | | 104 | | |
| 44 | Bearing 6205 2Z | 020/19 | 105 | Pin | 023/21 |
| 45 | Snap ring | | 106 | Pin | 023/21 |
| 46 | Bearing 629 | 043/05 | 107 | Dowel M8x10 DIN 915 | |
| 47 | Snap ring D.9 E DIN 471 | | 108 | Nut M12 DIN 936 | |
| 48 | Pump carrier | 003/05 | 109 | HH screw M12x30 DIN 933 | |
| 49 | HSHC screw M4x12 DIN 912 | | 110 | Dowel M8x10 DIN 914 | |
| 50 | Hexagon lock nut M20 DIN 936 | | 111 | Head gear | 024/19 |
| 51 | Washer x M6 DIN 125/A | | 112 | | |
| 52 | HSHC screw M6x20 DIN 912 | | 113 | | |
| 53 | AC Pump | 041/05 | 114 | Countervice pin | 022/07 |
| 54 | Water pipe | | 115 | Rotating plate | 007/19 |
| 55 | Filter FB 1 | 045/05 | 116 | Head pin | 057/07 |
| 56 | Fan guard | | 117 | Oiler D.6 | |
| 57 | Fan | | 118 | HSHC screw M6x60 DIN 912 | |
| 58 | Rotor | | 119 | HSHC screw M8x20 | |
| 59 | Stator | | 120 | Washer | |
| 60 | HSFHC Screw M8X30 DIN 7991 | | 121 | HSHC screw M10x20 DIN 912 | |
| 61 | Washer | | 122 | Rear motor flange | |

| | | | | | |
|---|---|---|---|---|---|
| 123 | Washer | | 200 | Box<br>Cover box | 066/90<br>067/90 |
| 124 | Counter-vice fastening bracket | 031/19 | 201 | Plate | 069/90 |
| 125 | Release lever M 8x20 | 025/21 | 202 | Omega raceway | |
| 126 | Sphere D.30 FM 10 | 082/14 | 203 | Changeover switch | 011/90 |
| 127 | Positioning pin | 022/21 | 204 | RH screw M4x14 DIN 84-A | |
| 128 | Nut M10 DIN 936 | | 205 | HSHC screw M4x6 DIN 912 | |
| 129 | | | 206 | Fuse blok PCH 3x38 | 092/90 |
| 130 | HH screw M12x80 DIN 933 | | 207 | Contact | |
| 131 | | | 208 | Emergency button | 085/90 |
| 132 | Washerx M6 DIN 125/A | | 209 | TBEI screw M4x6 ISO 7380 | |
| 133 | Stake D.9x18 | | 210 | Remote controlled switch | 032/90 |
| 134 | | | 211 | | |
| 135 | | | 212 | Main switch | 002/90 |
| 136 | | | 213 | | |
| 137 | | | 214 | RH screw M4x14 DIN 7981 | |
| 138 | | | 215 | Fuse blok PCH 2x38 | 094/90 |
| 139 | HH screw M10x25 DIN 931 | | 216 | Fuse blok PCH 1x38 | 093/90 |
| 140 | Washer x M10 DIN 125/A | | 217 | Transformer 20 VA | 042/90 |
| 141 | Fixed antifraze bracket | 039/03 | 218 | Micro switch of handle | 028/90 |
| 142 | HSHC screw M8x20 DIN 912 | | 219 | HSFHC screw M4x8 DIN 7991 | |
| 143 | Movable antifraze bracket | 028/05 | 220 | Electrical cable 2x1 | |
| 144 | Dowel M8x25 DIN 914 | | 221 | RH screw M2,9x13 DIN 7981 | |
| 145 | HSFHC Screw M6X16 DIN 7991 | | 222 | Button | |

350 NEW

## Scelta delle seghe - Blade selection
## Choix des Fraises scie - Wahl der Sageblatter

| Diametro - Diameter<br>Diametre - Durchmesser | | 200 | 225 | 250 | 275 | 300 | 315 | 350 |
|---|---|---|---|---|---|---|---|---|
| Spessore - Thickness<br>Epaisseur - Dicke | | 1,8 | 1,8 | 2 | 2,5 | 2,5 | 2,5 | 3 |
| b= 10 - 80 | t | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| g = ⩽ 2 | z | 200 | 230 | 250 | 280 | 300 | 320 | 350 |
| b= 10 - 80<br>g= 2- 4<br>d=10 - 18 | t | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| | z | 130 | 140 | 160 | 170 | 190 | 200 | 220 |
| b= 20 - 80<br>g= 4-10<br>d=18 - 30 | t | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| | z | 80 | 90 | 100 | 110 | 120 | 120 | 140 |
| d= 30- 40 | t | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| | z | 60 | 70 | 80 | 90 | 90 | 100 | 110 |
| d>40 | t | // | // | // | 12 | 12 | 12 | 12 |
| | z | // | // | // | 70 | 80 | 80 | 90 |

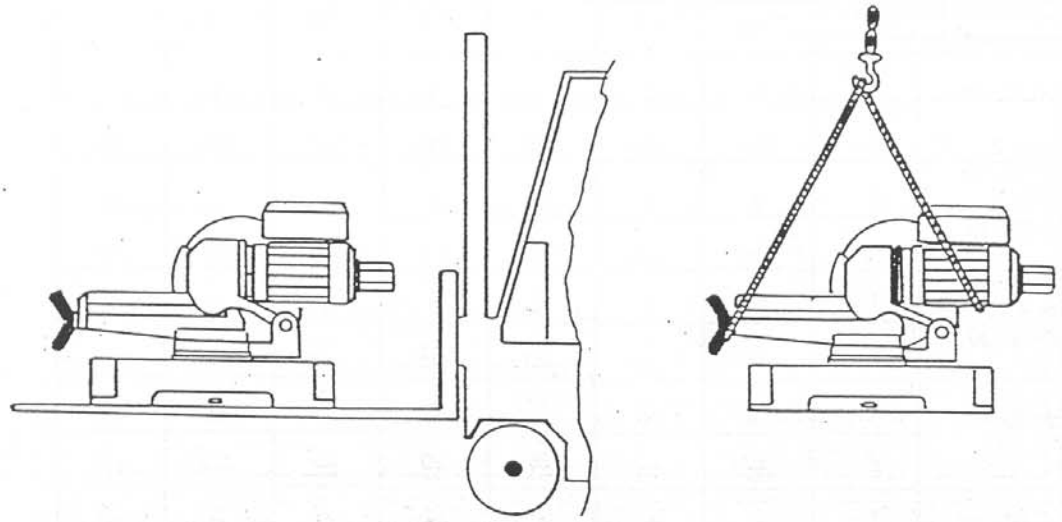



Si garantisce il funzionamento ottimale della vite-corona utilizzando seghe con fori di trascinamento.
Best performance of worm screw worm wheel gearing is guaranteed when circular saw blades with drawing-holes are used
Nous garantissons le bon fonctionnement de la vis et couronne seulement si l'on emploie des fraise-scies avec trous d'entrainement.
Die verwendung von Sageblattern mit Mitnehmerlochern sichern den guten Betrieb der Schnecke und des Scheckenkranzes.

b= diametro esterno/altezza (tubi) – outside diameter/height (pipe)
diametre extérieur/hauteur (tube) – aussendurchmesser/hohe (rohr)
d= diametro/altezza (pieni) – diameter/height (solid)
diamètre/hauter (plein) – durchmesser/hohe (voll)
g= spessore del tubo – pipe thickness
epaisseur du tube – rohrdicke
t= passo dentatura – toothing pitch
pas denture – entfernung verzahnung
z= numero di denti – number of teeth

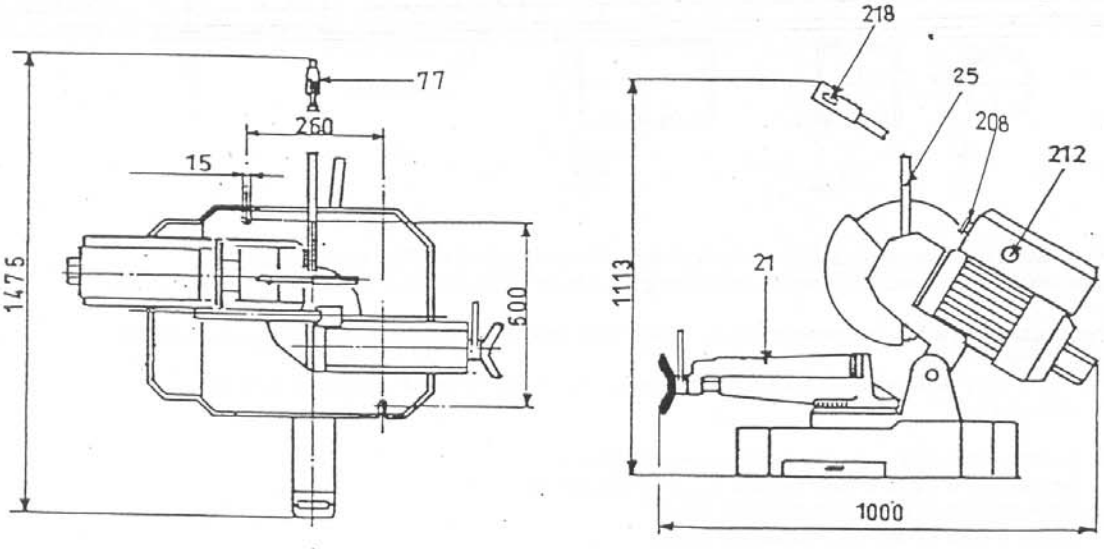
ALLEGATO - 1 -

## MOVIMENTAZIONE E TRASPORTO

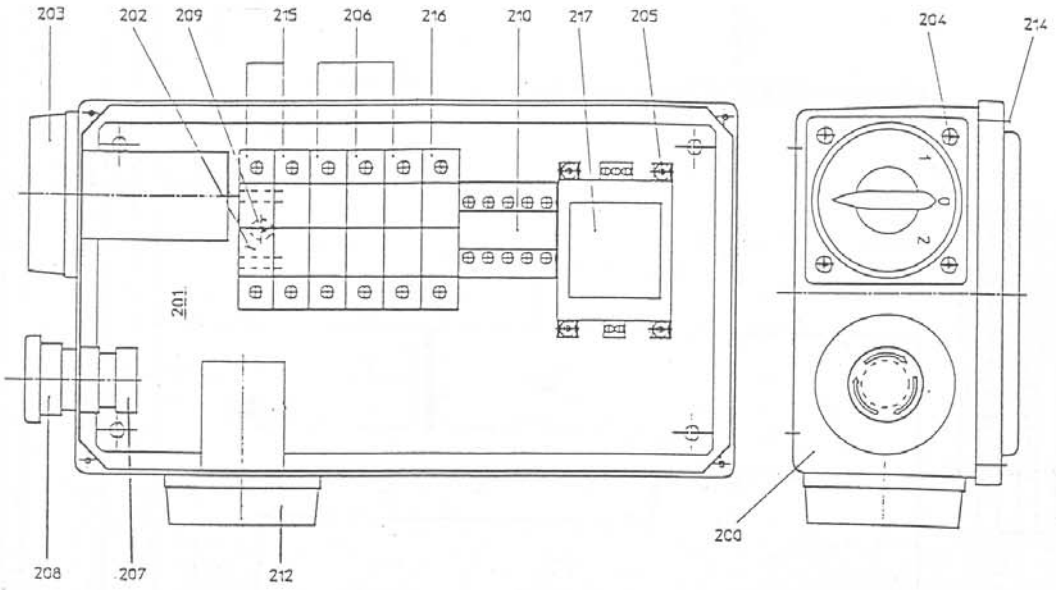


DIS. 1

## PIANO DI INSTALLAZIONE

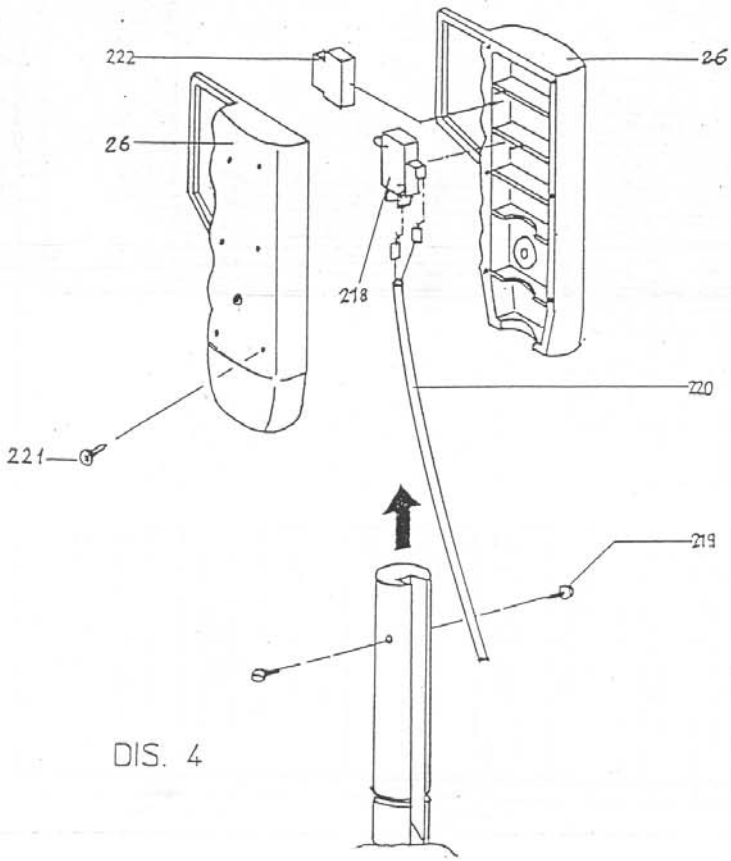



DIS. 2



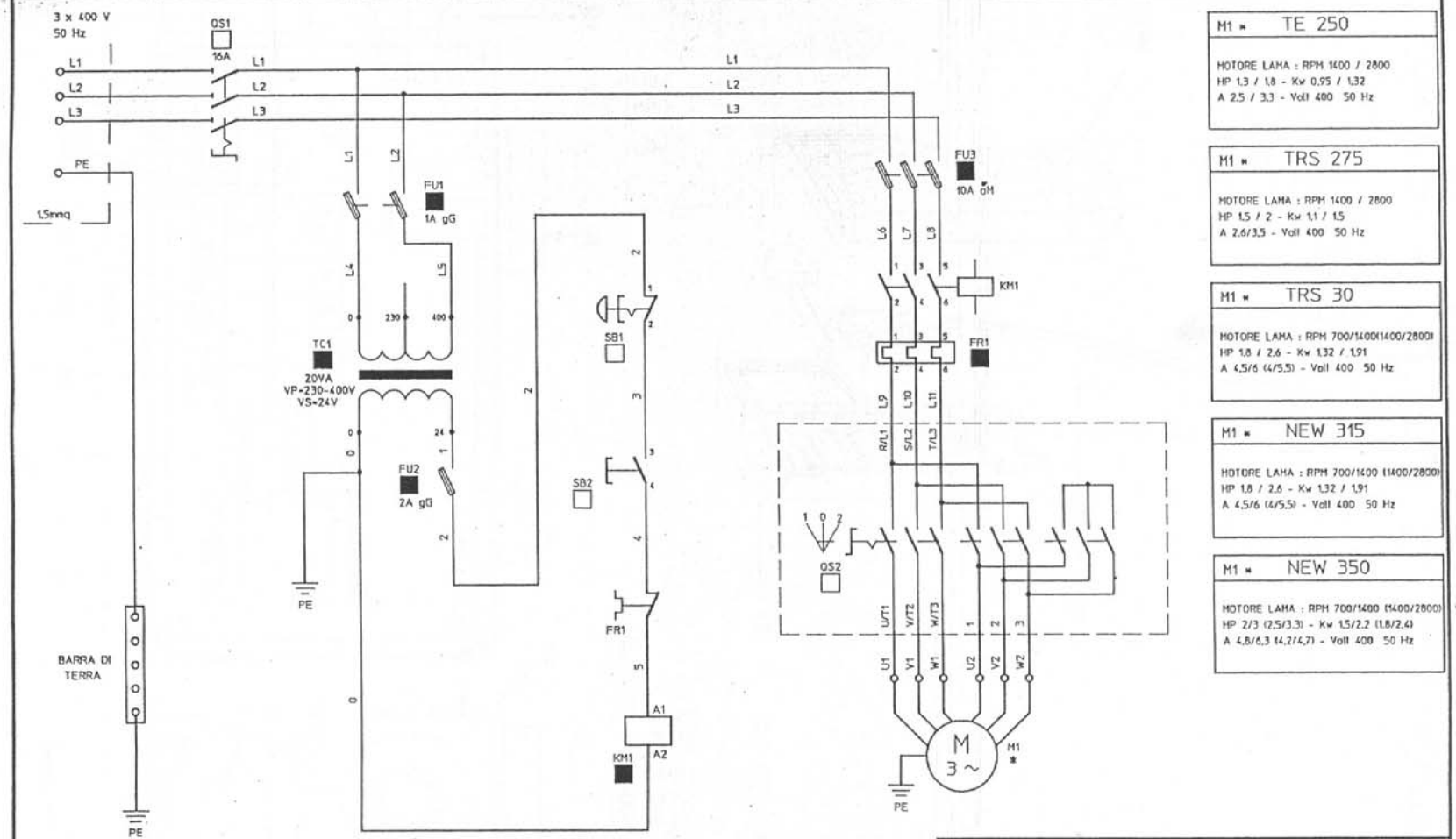

DIS. 3

Cassetta Impianto elettrico
Electric Box
Boîte Eléctrique
Schaltkasten
Caja Eléctrica




DIS. 4

ALLEGATO 2




| | |
|---|---|
| QS1 | INTERRUTTORE GENERALE |
| QS2 | COMMUTATORE MOTORE DISCO |
| SB1 | PULSANTE EMERGENZA |
| SB2 | MICROINTERRUTTORE MANIGLIA |
| KM1 | TELERUTTORE |
| FR1 | RELE' TERMICO |

**M1 = TE 250**

MOTORE LAMA : RPM 1400 / 2800
HP 1,3 / 1,8 - Kw 0,95 / 1,32
A 2,5 / 3,3 - Volt 400 50 Hz

**M1 = TRS 275**

MOTORE LAMA : RPM 1400 / 2800
HP 1,5 / 2 - Kw 1,1 / 1,5
A 2,6/3,5 - Volt 400 50 Hz

**M1 = TRS 30**

MOTORE LAMA : RPM 700/1400(1400/2800)
HP 1,8 / 2,6 - Kw 1,32 / 1,91
A 4,5/6 (4/5,5) - Volt 400 50 Hz

**M1 = NEW 315**

MOTORE LAMA : RPM 700/1400 (1400/2800)
HP 1,8 / 2,6 - Kw 1,32 / 1,91
A 4,5/6 (4/5,5) - Volt 400 50 Hz

**M1 = NEW 350**

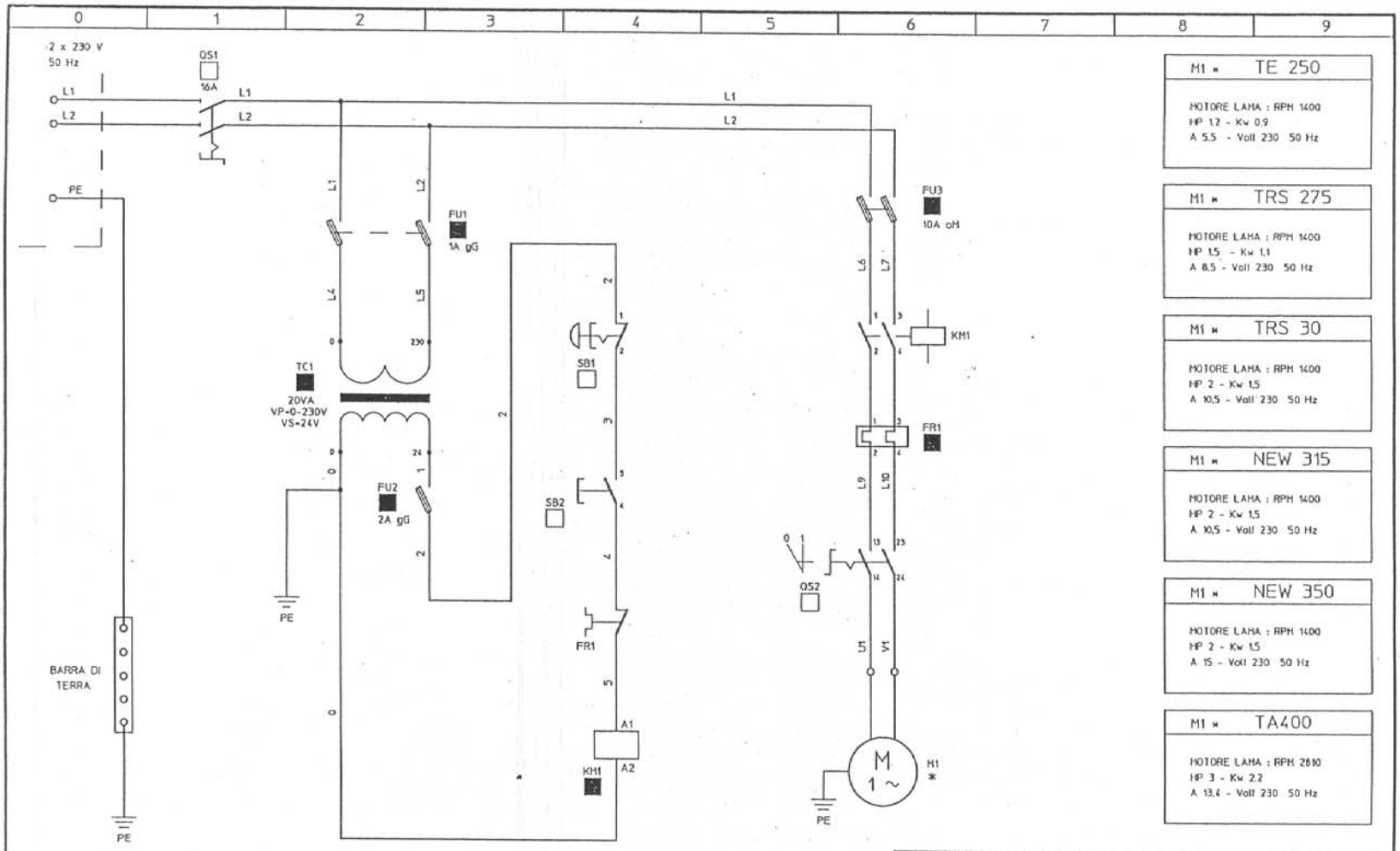
MOTORE LAMA : RPM 700/1400 (1400/2800)
HP 2/3 (2,5/3,3) - Kw 1,5/2,2 (1,8/2,4)
A 4,8/6,3 (4,2/4,7) - Volt 400 50 Hz

SCHEMA ELETTRICO per : TRONCATRICE TE 250 - TRS 275 - TRS 30 - NEW 315 - NEW 350 - Voltr 400/50 Trifase

| | |
|---|---|
| Data | 30.09.02 |
| Firma | LucaDG |
| Contr./Appr. | |

N° Schema : /

Foglio 1 di 1




| | |
|---|---|
| QS1 | INTERRUTTORE GENERALE |
| QS2 | INTERRUTTORE MOTORE DISCO |
| SB1 | PULSANTE EMERGENZA |
| SB2 | MICROINTERRUTTORE MANIGLIA |
| KM1 | TELERUTTORE |
| FR1 | RELE' TERMICO |

**M1 = TE 250**

MOTORE LAMA : RPM 1400
HP 1.2 - Kw 0.9
A 5.5 - Voll 230 50 Hz

**M1 = TRS 275**

MOTORE LAMA : RPM 1400
HP 1.5 - Kw 1.1
A 8.5 - Voll 230 50 Hz

**M1 = TRS 30**

MOTORE LAMA : RPM 1400
HP 2 - Kw 1.5
A 10.5 - Voll 230 50 Hz

**M1 = NEW 315**

MOTORE LAMA : RPM 1400
HP 2 - Kw 1.5
A 10.5 - Voll 230 50 Hz

**M1 = NEW 350**

MOTORE LAMA : RPM 1400
HP 2 - Kw 1.5
A 15 - Voll 230 50 Hz

**M1 = TA400**

MOTORE LAMA : RPM 2810
HP 3 - Kw 2.2
A 13.4 - Voll 230 50 Hz

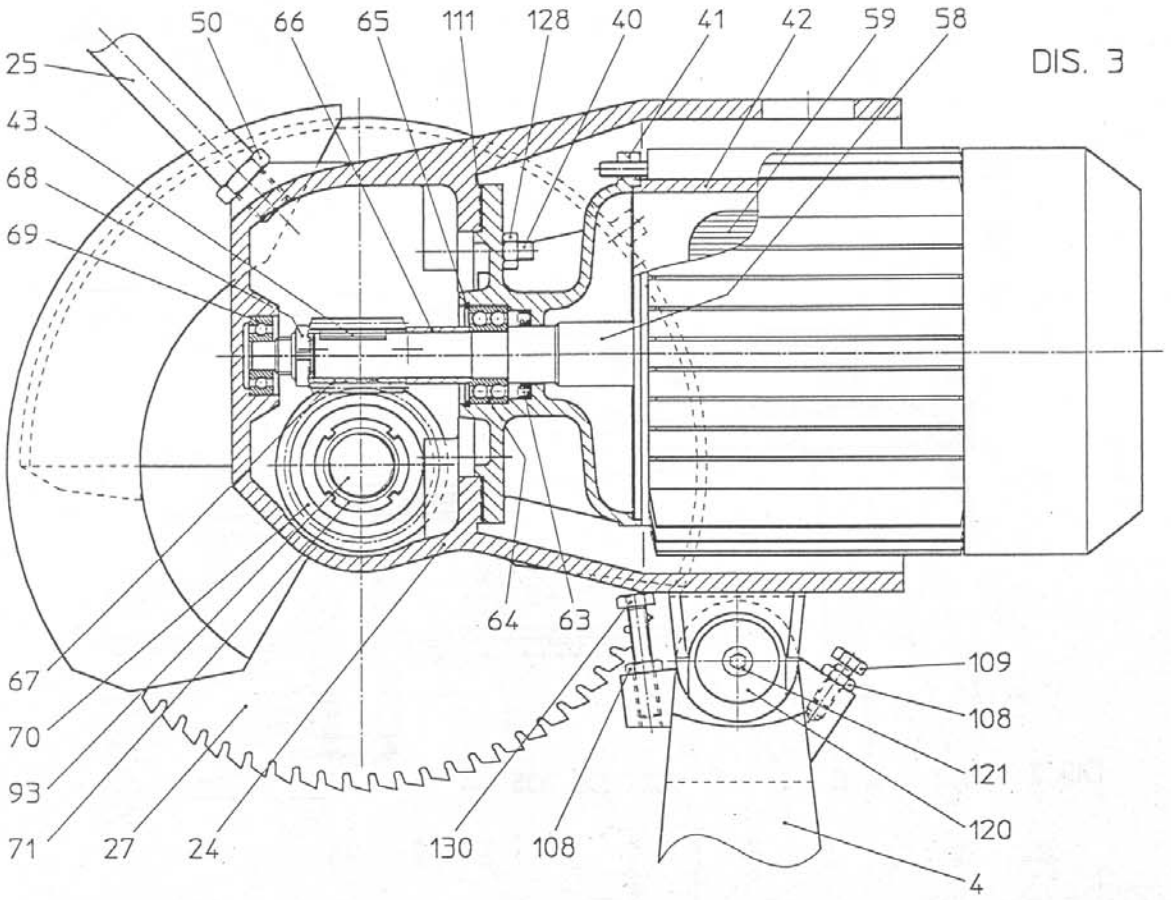
SCHEMA ELETTRICO per : TRONCATRICE TE 250 - TRS 275 - TRS 30
NEW 315 - NEW 350 - TA 400 Voll 230/50 Monofase

| | |
|---|---|
| Data | 30.09.02 |
| Firma | LucaDG |
| Contr./Appr. | |

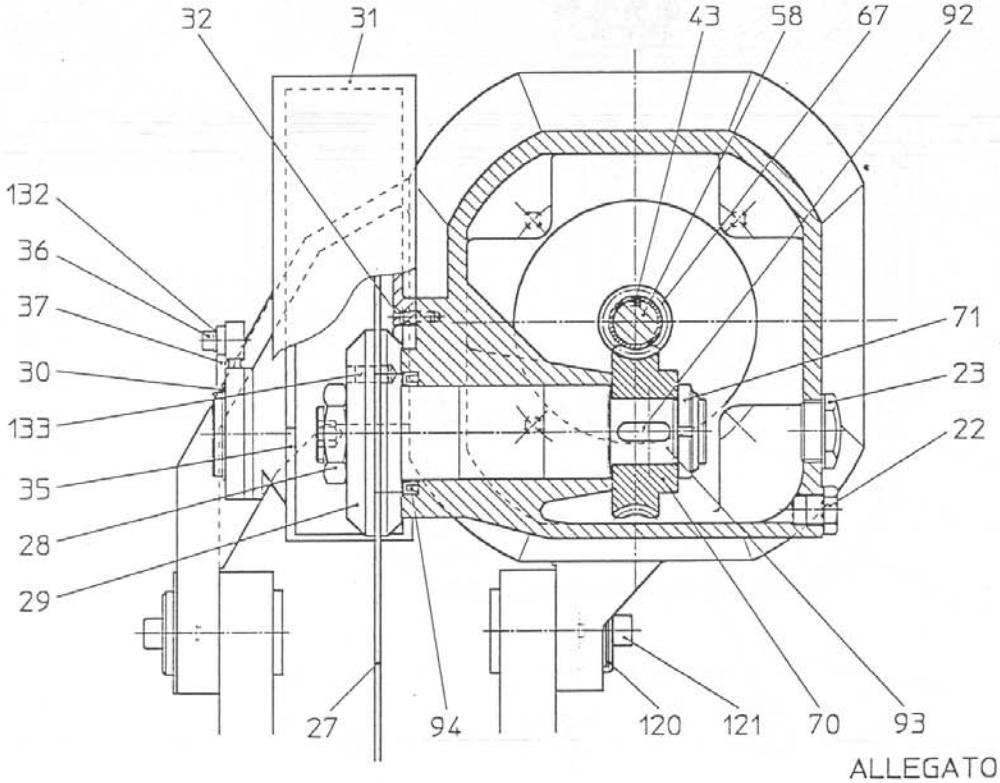
N° Schema : /

Foglio 1 di 1

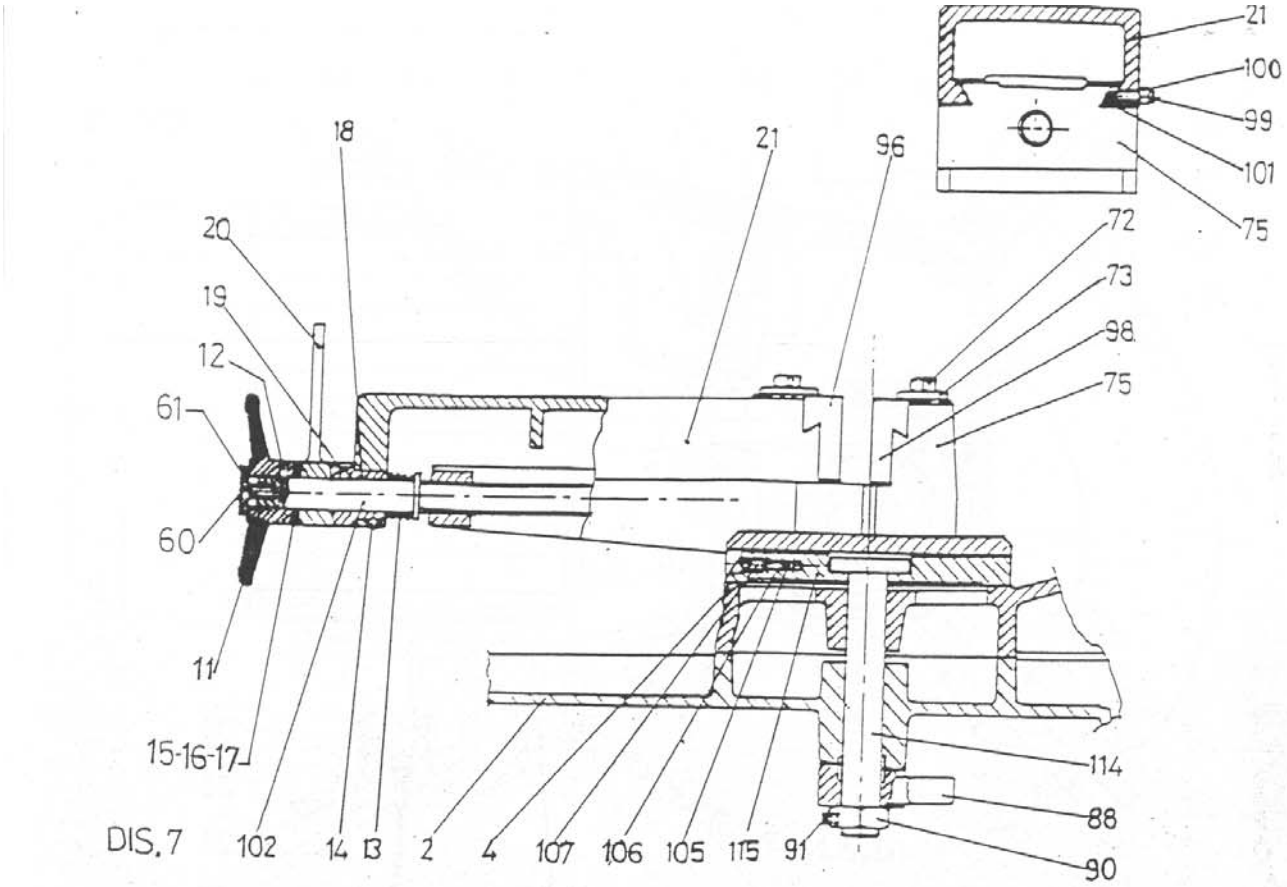
DIS. 3




DIS. 4




ALLEGATO - 3 -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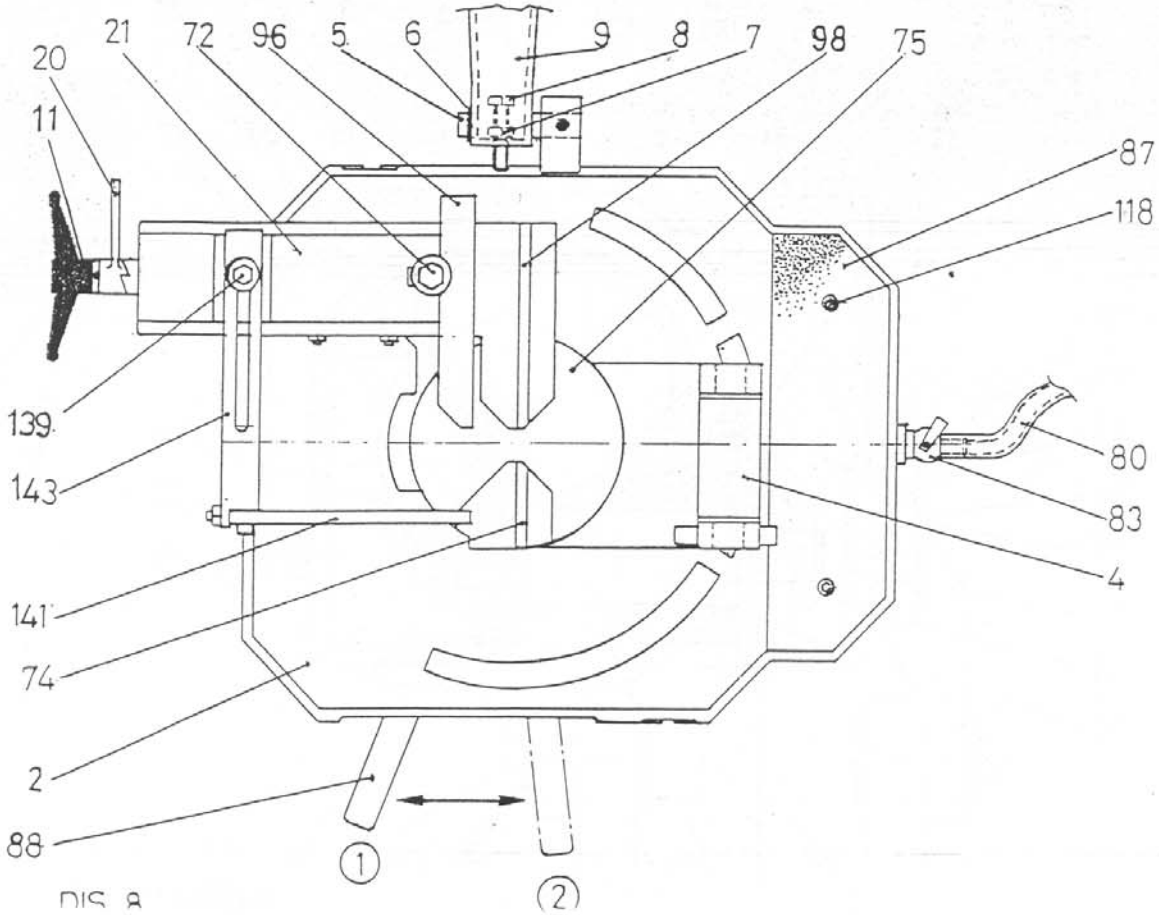
DIS. 7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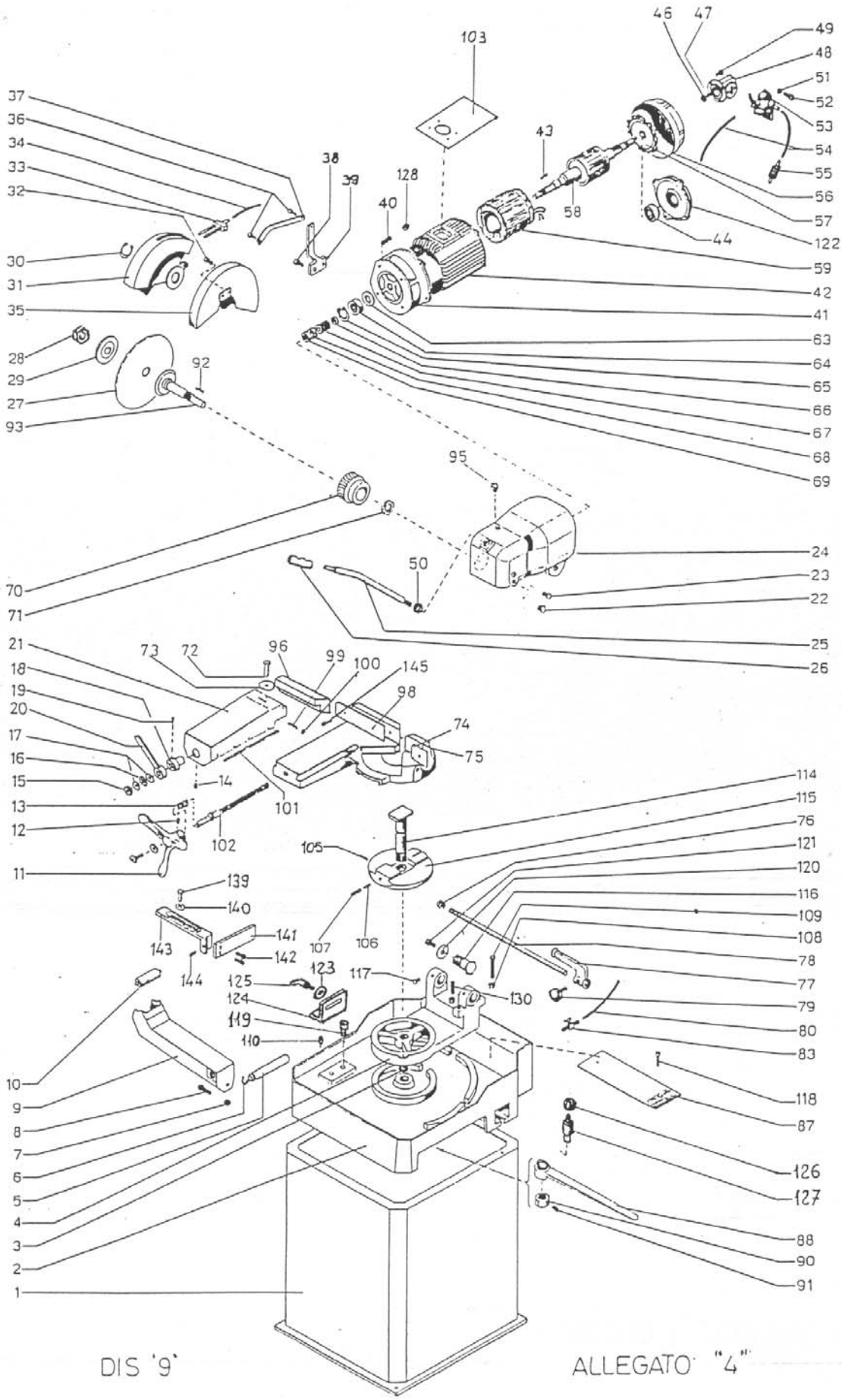
DIS. 8




DIS '9'

ALLEGATO "4"